

**United States Patent** [19]

Farquhar et al.

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## [54] PCMCIA STANDARD MEMORY CARD FRAME

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[52] U.S. Cl. 174/52.1; 361/753; 361/575

[58] Field of Search 361/684, 737, 748, 753, 361/752, 757; 174/52.4, 52.5, 52.1; 428/76, 192, 542.8; 156/73.1; 264/248, 272.17

## [56] References Cited

## U.S. PATENT DOCUMENTS

3,579,817	5/1971	Boyle	174/52.4
3,901,731	8/1975	Warshawski et al.	429/9
4,164,068	8/1979	Shropshire et al.	156/73.1
4,305,897	12/1981	Hazama et al.	264/248
5,107,073	4/1992	Steffen	174/52.1
5,208,732	5/1993	Boudoin et al.	361/684
5,242,310	9/1993	Leung	361/737

## OTHER PUBLICATIONS

Branson Technical Brochure, PW-4, Ultrasonic Inspection, Nov. 1981.

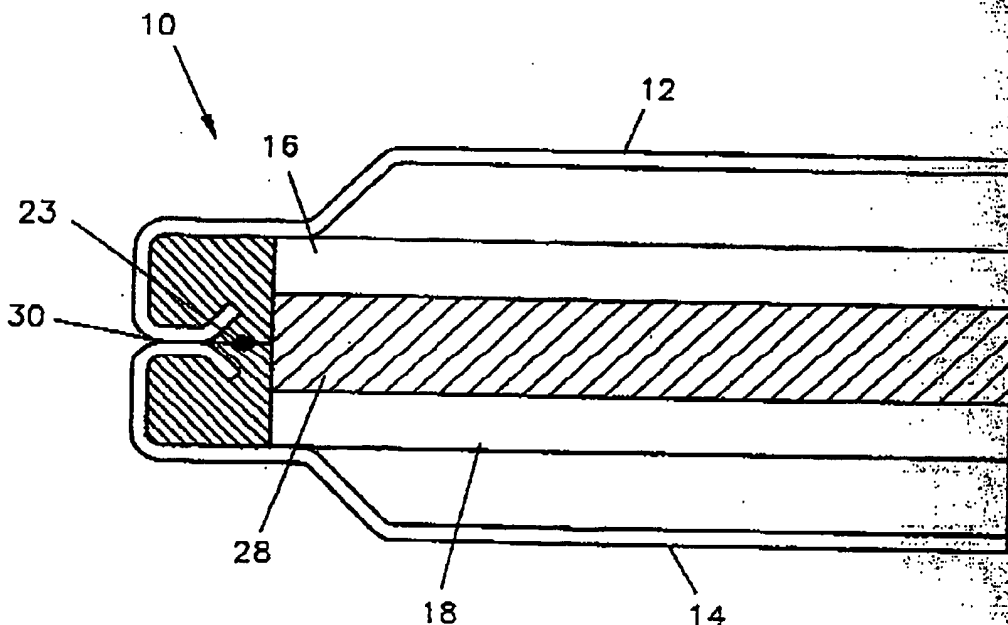
Branson Technical Brochure, PW-3, Joint Design For Ultrasonic Welding, Aug. 1980.

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## [57] ABSTRACT

A container for a memory card and the process by which the container is manufactured. The container comprises chiefly two stamped steel covers, (an upper and a lower cover half), each secured to a plastic frame element. The cover halves are secured by extended fingers which wrap around the plastic frame. This provides a double layer of metal at the perimeter of the frame. The two cover halves are situated so as to encapsulate the subject PCB and to affix it in its proper position. The two cover halves are then welded together using sonic welding on the plastic frame. The frame has been designed to meet all PCMCIA standards, including polarizing keys and grounding points.

6 Claims, 4 Drawing Sheets



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